Addison Clear Wave
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AC I405-L

High RI, Low Viscosity Dual Cure Adhesive

Features

- Low viscosity
- Good adhesion to various substrates: glass and plastics
- Good flow properties
- Flexible
- Optically clear in thin film

Description

- High refractive index adhesive

APPLICATIONS

Optical components applications

TYPICAL PROPERTIES

Liquid	
Viscosity (cps, 25 °C)	1,500 to 1,800
Storage (°C)	15 to 25
Shelf life (20 - 25 °C)	1 month
Pot life (20 - 25 °C)	2 weeks
Cured film	
Shrinkage (linear, %)	< 0.2
Glass transition temperature (°C, DMA)	54.7
Hardness – Shore D	55 - 58
Refractive index of cured film (25°C)	
@ 589 nm	1.538
@ 1310 nm	1.524
@ 1550 nm	1.520
Physical properties tested at 25°C, 50% RH (ASTM D638)	
Elongation (%)	20.0
Modulus, psi (kgf/mm^2)	58,571 (41)
Coefficient of thermal expansion (TMA), 75 μm film	
below Tg (x10^{-6}), °C^{-1}	37
above Tg (x10^{-6}), °C^{-1}	83
UV curing conditions	
Spot cure system – UV dose (J/cm^2),air	
250 – 450 nm filter	3.0 to 5.0
Flood cure system – UV dose (J/cm^2), nitrogen	0.6 to 1.0
Thermal curing conditions (between 2 substrates or in nitrogen)	
75 °C	120 to 180 minutes
80 °C	90 to 120 minutes
85 °C	60 to 90 minutes

If thermal curing is the only curing method, the material is required to be placed between two substrates or to be cured under nitrogen to obtain a fully cured film

* Minimum intensity recommended for Spot lamp system: 50 mW/cm^2
** Intensity recommended for Flood lamp system: 49 WPcm or 125 WPI or 50 mW/cm^2

SAFETY AND HANDLING

The un-cured adhesive can be cleaned from apparatus with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), or commercial alcohol based cleaning solution.

Use caution in handling this material. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read Material Safety Data Sheet before handling.